

Attorney Docket No. 0275Y-583POA

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What is claimed is:

1. A brush assembly for an electric motor having an end cap assembly and a commutator, comprising:
  - 5 a base having a member for securing said base to the motor end cap assembly;
  - a brush housing associated with said base and having first and second open ends;
  - a brush, defining an axis, slidably supported within said housing
  - 10 between said first and second open ends, said brush extending from one of said first and second open ends, said brush including a surface having a spring retention plunge, said spring retention plunge defining an arcuate face angled relative to said axis on an angle greater than 0° and up to 15° and a wall formed in said surface for retaining contact of said biasing member with
  - 15 said spring retention plunge;
  - a biasing member having a contact end exerting a force directly on said arcuate face for biasing said brush within said housing for contact with the commutator, said contact end defining a line which extends across said arcuate face such that said contact end abuts said arcuate face along said
  - 20 line for prohibiting excessive movement of the contact end along an axis transverse to said brush axis; and
  - an electrical connector electrically coupled with said brush for electrical connection between the commutator and a power supply.
- 25 2. Cancelled.
3. The brush assembly of Claim 1, wherein a slope of said spring retention plunge enables transverse retention of said spring.
- 30 4. A brush for an electric motor, comprising:
  - a body having a desired configuration for fitting within a housing, said body defining an axis; and

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5 a spring retention plunge formed in a surface of said body, said plunge defining an arcuate face angled relative to a plane transverse to said axis, said surface at a terminal end of said body, wherein a slope of said arcuate face is greater than zero degrees and up to 15°, said arcuate face having a curvature sized to receive a spring such that the spring contacts the arcuate face along a line to prohibit excess movement of the spring on the arcuate surface for enabling spring force exerted thereon to be substantially constant as said body wears and a wall in said surface for retaining contact of a biasing member with said spring retention plunge.

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5. Cancelled.

6. The brush of Claim 4, wherein said slope of said spring retention plunge enables transverse retention of a biasing member.

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7. A method of manufacturing a brush for an electric motor, comprising the steps of:

providing a brush blank defining an axis therethrough and having a top surface;

20 forming an arcuate spring retention plunge in said top surface having a slope relative to said axis; and

plunging one of a grinding disc and cutting wheel into said top surface.

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8. Cancelled.

9. The method of Claim 8, further comprising the step of angling said one of a grinding disc and cutting wheel at an angle relative to said axis.

30 10. The method of Claim 7, further comprising the step of providing a diameter of said arcuate spring retention plunge, perpendicular to said axis, enabling lateral retention of a biasing member:

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11. The method of Claim 7, further comprising the step of providing a degree of said slope of said spring retention plunge sufficient to enable transverse retention of a biasing member.